

**REMARKS**

In response to the office action dated October 19, 2005, Applicants respectfully request reconsideration based on the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1, 42-46, 49-57, and 59-61 have been amended, leaving Claims 1-62 for consideration upon the entry of the amendments. Page 5, paragraph [0016] of the specification discusses the features of amended Claims 1, 43-46, 49-52, 54-57, and 59-61. No new matter has been added by the amendments.

***Claim Rejections-35 U.S.C. 101***

Claims 1, 42-45, and 52-56 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory matter. Claims 1, 42-45, and 52-56 have been amended to indicate use of computer, as listed above. Withdrawal of the Claim rejections under 35 U.S.C. 101 is respectfully requested.

***Claim Rejections-35 U.S.C. 103***

Claims 1-2, 5, 26, 33, 45-46, 51-52, 56-57, and 61 stand rejected under 35 U.S.C. 103(a) as being unpatentable over NPI, "Mixed Waste Focus Area/Characterization Monitoring Sensor Technology Nondestructive Waste Assay Capability Evaluation" by Becker G.K. et al. (hereinafter "Becker") in view of U.S. Patent No. 5,961,610 issued by Kelly et al. (hereinafter "Kelly").

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Applicant respectfully traverses the rejections because Becker in view of Kelly does not teach or suggest all elements of independent Claims 1, 45-46, 51-52, 56-57, and 61.

Claim 1, as amended, recites "A method of using a computer processor for automated independent technical review, the method comprising: receiving an assay result of a radioactive

waste container; generating a review template; determining whether said assay result is within a predetermined parameter based on said generating said review template; determining whether a review is required if said assay result is not within said predetermined parameter; rejecting said assay result if said review is not required and said assay result is not within said predetermined parameter; and generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result." (Emphasis Added)

In contrast, Becker fails to teach or suggest at least the feature "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as recited in Claim 1. Kelly does not cure the deficiency of Becker because it fails to teach or suggest the feature "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as recited in Claim 1.

Therefore, Becker in view of Kelly does not render Claim 1 obvious for at least the reason that Becker in view of Kelly does not teach or suggest all of the elements of Claim 1. Claims 45-46, 51-52, 56-57, and 61 also include the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", and Applicant submits that they are patentable over Becker in view of Kelly for at least the reasons given for Claim 1. Claims 2, 5, 26, and 33 depend from Claim 1 and are believed to be allowable at least due to their dependency on Claim 1.

Claims 3 and 47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kelly and further in view of U.S. Patent No. 6,800,452 issued to McNeil et al. (hereinafter "McNeil"). Applicant respectfully traverses the rejections.

McNeil does not cure the deficiency of Becker in view of Kelly because McNeil fails to teach or suggest the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as recited in Claim 1. McNeil further fails to teach or suggest the element "generating a comment template if said review is required", as recited in Claim 3, which depends from Claim 1. Col. 15, lines 45-67 of McNeil teaches editing predefined templates such as a calibration template, an acquisition template, a pipette operation template, or a washing operation template,

but does not teach generating a comment template. Therefore, Becker in view of Kelly and further in view of McNeil does not render Claim 3 obvious, because it fails to teach or suggest the element "generating a comment template if said review is required", as well as the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result".

Independent Claim 46 also includes the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", and Applicant submits that it is patentable over Becker in view of Kelly and further in view of McNeil for at least the reasons given for Claim 1. Claim 47 depends from Claim 46 and is believed to be allowable at least due to its dependency on Claim 46.

Claims 4, 6-23, 34-41, and 62 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kelly and further in view of NPL "Total Measurement Uncertainty for Nondestructive Assay of Transuranic Waste at the Waste Receiving and Processing Facility, initial Release date 03/03/99 on EDT-623513, Revision 7" by Welsh Terri et al. (hereinafter "Welsh"). Applicant respectfully traverses the rejections.

Welsh does not cure the deficiency of Becker in view of Kelly because it fails to teach or suggest the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as recited in Claim 1. Therefore, Becker in view of Kelly and further in view of Welsh does not render Claim 1 obvious for at least the reason that Becker in view of Kelly and further in view of Welsh does not teach or suggest all of the elements of Claim of Claim 1. Claims 4, 6-23, 34-41, and 62 depend from Claim 1, and thus are believed to be allowable at least due to their dependency on Claim 1.

Claims 24-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kelly, Welsh, and further in view of U.S. Patent No. 4,737,234 issued to Francis H. Ruddy (hereinafter "Ruddy"). Applicant respectfully traverses the rejections.

Ruddy does not cure the deficiency of Becker, Kelly, and Welsh because it fails to teach or suggest the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as

recited in Claim 1. Therefore, Becker in view of Kelly, Welsh, and further in view of Ruddy does not render Claim 1 obvious for at least the reason that Becker in view of Kelly, Welsh, and further in view of Ruddy does not teach or suggest all of the elements of Claim 1. Claims 24-25 depend from Claim 1, and thus are believed to be allowable at least due to their dependency on Claim 1.

Claims 27-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kelly and further in view of Ruddy. Applicant respectfully traverses the rejections.

As stated above, none of Becker, Kelly, and Ruddy teaches or suggest the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as recited in Claim 1. Therefore, Becker in view of Kelly and further in view of Ruddy does not render Claim 1 obvious for at least the reason that Becker in view of Kelly and further in view of Ruddy does not teach or suggest all of the elements of Claim 1. Claims 27-30 depend from Claim 1, and thus are believed to be allowable at least due to their dependency on Claim 1.

Claims 31-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kelly and further in view of U.S. Patent No. 5,386,439 issued to Leroy et al. (hereinafter "Leroy") Applicant respectfully traverses the rejections.

Leroy does not cure the deficiency of Becker in view of Kelly because it fails to teach or suggest the element "generating a report indicating that an expert review is required if an item description code for said radioactive waste container is not found within said assay result", as recited in Claim 1. Therefore, Becker in view of Kelly and further in view of Leroy does not render Claim 1 obvious for at least the reason that Becker in view of Kelly and further in view of Leroy does not teach or suggest all of the elements of Claim 1. Claims 31-32 depend from Claim 1, and thus are believed to be allowable at least due to their dependency on Claim 1.

Claims 42-43, 48-49, 53-54, and 58-59 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Welsh. Applicant respectfully traverses the rejections.

Claim 42, as amended, recites "A method of using a computer processor for automated independent technical review, the method comprising: receiving an assay result of a radioactive waste container containing a radioactive material; determining a relative error for a plutonium

isotope based on said assay result; determining whether said relative error is within a first predetermined parameter; determining whether a first review is required if said relative error is not within said first predetermined parameter; rejecting said assay result if said first review is not required and said relative error is not within said first predetermined parameter; determining whether said radioactive material is lumped; and determining whether a second review is required if said radioactive material is lumped.” (Emphasis Added)

The method as recited in Claim 42 determines that the first review is required or not, and then rejects the assay result based on the value of the relative error. In contrast, page 47, paragraph 5 of Becker simply teaches that for most participants, significant error is associated with the determination of one or more of the  $^{241}\text{Am}$ ,  $^{235}\text{U}$ , and  $^{238}\text{U}$  mass values for the SG4 test sample; and that two of the four participants had unacceptable alpha activity percent recovery and primary plutonium mass determination. Becker however, is silent in determining that a first review is required or not before rejecting the assay result. Therefore, Becker fails to teach or suggest the element “determining whether a first review is required if said relative error is not within said first predetermined parameter”, as recited in Claim 42.

Welsh does not cure the deficiency of Becker because it fails to teach or suggest the element “determining whether a first review is required if said relative error is not within said first predetermined parameter”, as recited in Claim 42. Accordingly, Becker in view of Welsh does not render Claim 42 obvious for at least the reason that Becker in view of Welsh does not teach or suggest all of the elements of Claim 42.

Claims 48, 53, and 58 also include the element “determining whether a first review is required if said relative error is not within said first predetermined parameter”, and Applicant submits that they are patentable over Becker in view of Welsh for at least the reasons given for Claim 42.

Claim 43, as amended, recites “A method of using a computer processor for automated independent technical review, the method comprising: receiving an assay result of a radioactive waste container containing a radioactive material; determining a total plutonium weight percent based on said assay result; rejecting said assay result if said total plutonium weight percent is greater than about 10 percent; determining criticality safety value based on said assay result; rejecting said assay result if said criticality safety value is greater than about 220 grams; and

generating a report indicating that an expert review is required if said total plutonium weight percent for said radioactive waste container is not found within said assay result." (Emphasis Added)

In contrast, none of Becker and Welsh teaches or suggests the element "generating a report indicating that an expert review is required if said total plutonium weight percent for said radioactive waste container is not found within said assay result", as recited in Claim 43. Accordingly, Becker in view of Welsh does not render Claim 43 obvious for at least the reason that Becker in view of Welsh does not teach or suggest all of the elements of Claim 43.

Claims 49, 54, and 59 also include the element "generating a report indicating that an expert review is required if said total plutonium weight percent for said radioactive waste container is not found within said assay result", and Applicant submits that they are patentable over Becker in view of Welsh for at least the reasons given for Claim 43.

Claims 44, 50, 55, and 60 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Ruddy. Applicant respectfully traverses the rejections.

Claim 44, as amended, recites "A method of using a computer processor for automated independent technical review, the method comprising: receiving an assay result of a radioactive waste container containing a radioactive material; determining that said assay result requires a review if the ratio of a Pu<sup>239</sup> isotope and a Am<sup>241</sup> isotope is compared by using a nuclide total result and said ratio is less than about 200; determining that said assay result requires a review if the ratio of a Pu<sup>239</sup> isotope and a Np<sup>237</sup> isotope is compared by using a nuclide total result and said ratio is less than about 125; determining that said assay result requires a review if a count rate corresponding to an U<sup>233</sup> isotope is greater than about 5 times an error value; and generating a report indicating that an expert review is required if the ratio of a Pu<sup>239</sup> isotope and a Am<sup>241</sup> isotope, the ratio of a Pu<sup>239</sup> isotope and a Np<sup>237</sup> isotope, or the count rate corresponding to an U<sup>233</sup> isotope is not found within said assay result. (Emphasis Added)

None of Becker and Ruddy teaches or suggests the element "generating a report indicating that an expert review is required if the ratio of a Pu<sup>239</sup> isotope and a Am<sup>241</sup> isotope, the ratio of a Pu<sup>239</sup> isotope and a Np<sup>237</sup> isotope, or the count rate corresponding to an U<sup>233</sup> isotope is not found within said assay result", as recited in Claim 44. Therefore, Becker in view of Ruddy

does not render Claim 44 obvious for at least the reason that Becker in view of Welsh does not teach or suggest all of the elements of Claim 44.

Claims 50, 55, and 60 also include the element "generating a report indicating that an expert review is required if the ratio of a  $\text{Pu}^{239}$  isotope and a  $\text{Am}^{241}$  isotope, the ratio of a  $\text{Pu}^{239}$  isotope and a  $\text{Np}^{237}$  isotope, or the count rate corresponding to an  $\text{U}^{233}$  isotope is not found within said assay result", and Applicant submits that they are patentable over Becker in view of Welsh for at least the reasons given for Claim 44.

#### Conclusion

It is believed that the foregoing remarks fully comply with the Office Action and that Claims 1-62 are in condition for allowance. Accordingly, reconsideration and allowance is respectfully requested.

In the event the Examiner has any questions regarding this Amendment, Applicants' attorneys respectfully request the courtesy of a telephone conference.

In the event that there are any additional fees with respect to this Amendment, Applicants' attorneys respectfully request that such fees be withdrawn from Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,

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